

Pascal Van Hentenryck

List of Publications by Year in descending order

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Version: 2024-02-01

115
papers

4,382
citations

201575

27
h-index

133188

59
g-index

120
all docs

120
docs citations

120
times ranked

3212
citing authors

#	ARTICLE	IF	CITATIONS
1	Rapid assessment of disaster damage using social media activity. <i>Science Advances</i> , 2016, 2, e1500779.	4.7	431
2	Scenario-Based Planning for Partially Dynamic Vehicle Routing with Stochastic Customers. <i>Operations Research</i> , 2004, 52, 977-987.	1.2	359
3	A generic arc-consistency algorithm and its specializations. <i>Artificial Intelligence</i> , 1992, 57, 291-321.	3.9	292
4	A Two-Stage Hybrid Local Search for the Vehicle Routing Problem with Time Windows. <i>Transportation Science</i> , 2004, 38, 515-530.	2.6	250
5	The QC Relaxation: A Theoretical and Computational Study on Optimal Power Flow. <i>IEEE Transactions on Power Systems</i> , 2016, 31, 3008-3018.	4.6	220
6	A Linear-Programming Approximation of AC Power Flows. <i>INFORMS Journal on Computing</i> , 2014, 26, 718-734.	1.0	210
7	Prediction and behavioral analysis of travel mode choice: A comparison of machine learning and logit models. <i>Travel Behaviour & Society</i> , 2020, 20, 22-35.	2.4	176
8	Numerica. , 1997, , .		159
9	AC-Feasibility on Tree Networks is NP-Hard. <i>IEEE Transactions on Power Systems</i> , 2016, 31, 798-801.	4.6	141
10	Convex Relaxations for Gas Expansion Planning. <i>INFORMS Journal on Computing</i> , 2016, 28, 645-656.	1.0	104
11	Convex quadratic relaxations for mixed-integer nonlinear programs in power systems. <i>Mathematical Programming Computation</i> , 2017, 9, 321-367.	3.2	103
12	Performance of Social Network Sensors during Hurricane Sandy. <i>PLoS ONE</i> , 2015, 10, e0117288.	1.1	100
13	Strengthening the SDP Relaxation of AC Power Flows With Convex Envelopes, Bound Tightening, and Valid Inequalities. <i>IEEE Transactions on Power Systems</i> , 2017, 32, 3549-3558.	4.6	74
14	Predicting AC Optimal Power Flows: Combining Deep Learning and Lagrangian Dual Methods. <i>Proceedings of the AAAI Conference on Artificial Intelligence</i> , 2020, 34, 630-637.	3.6	72
15	Strategic directions in constraint programming. <i>ACM Computing Surveys</i> , 1996, 28, 701-726.	16.1	71
16	Constraint-Based Local Search. , 2017, , 1-38.		58
17	Constraint and Integer Programming in OPL. <i>INFORMS Journal on Computing</i> , 2002, 14, 345-372.	1.0	57
18	On Lattice Protein Structure Prediction Revisited. <i>IEEE/ACM Transactions on Computational Biology and Bioinformatics</i> , 2011, 8, 1620-1632.	1.9	54

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19	A conflict-based path-generation heuristic for evacuation planning. <i>Transportation Research Part B: Methodological</i> , 2016, 83, 136-150.	2.8	53
20	Search and strategies in OPL. <i>ACM Transactions on Computational Logic</i> , 2000, 1, 285-320.	0.7	50
21	Benders Decomposition for the Design of a Hub and Shuttle Public Transit System. <i>Transportation Science</i> , 2019, 53, 77-88.	2.6	48
22	Transmission system restoration with co-optimization of repairs, load pickups, and generation dispatch. <i>International Journal of Electrical Power and Energy Systems</i> , 2015, 72, 144-154.	3.3	46
23	Approximating line losses and apparent power in AC power flow linearizations. , 2012, , .		45
24	Combining Deep Learning and Optimization for Preventive Security-Constrained DC Optimal Power Flow. <i>IEEE Transactions on Power Systems</i> , 2021, 36, 3618-3628.	4.6	45
25	Transmission system repair and restoration. <i>Mathematical Programming</i> , 2015, 151, 347-373.	1.6	43
26	Joint Electricity and Natural Gas Transmission Planning With Endogenous Market Feedbacks. <i>IEEE Transactions on Power Systems</i> , 2018, 33, 6397-6409.	4.6	42
27	Computing folding pathways between RNA secondary structures. <i>Nucleic Acids Research</i> , 2010, 38, 1711-1722.	6.5	35
28	Assortment optimization under the Sequential Multinomial Logit Model. <i>European Journal of Operational Research</i> , 2019, 273, 1052-1064.	3.5	34
29	Optimal Resilient transmission Grid Design. , 2016, , .		33
30	Assortment optimization under a multinomial logit model with position bias and social influence. <i>4or</i> , 2016, 14, 57-75.	1.0	32
31	Differential Privacy for Power Grid Obfuscation. <i>IEEE Transactions on Smart Grid</i> , 2020, 11, 1356-1366.	6.2	32
32	Strengthening Convex Relaxations with Bound Tightening for Power Network Optimization. <i>Lecture Notes in Computer Science</i> , 2015, , 39-57.	1.0	32
33	Unit Commitment With Gas Network Awareness. <i>IEEE Transactions on Power Systems</i> , 2020, 35, 1327-1339.	4.6	31
34	Strategic stockpiling of power system supplies for disaster recovery. , 2011, , .		28
35	A branch-and-price-and-check model for the vehicle routing problem with location congestion. <i>Constraints</i> , 2016, 21, 394-412.	0.4	25
36	A Multistage Very Large-Scale Neighborhood Search for the Vehicle Routing Problem with Soft Time Windows. <i>Transportation Science</i> , 2015, 49, 223-238.	2.6	24

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37	CPBPV: a constraint-programming framework for bounded program verification. Constraints, 2010, 15, 238-264.	0.4	23
38	Primal and dual bounds for Optimal Transmission Switching. , 2014, , .		23
39	Dynamic Compressor Optimization in Natural Gas Pipeline Systems. INFORMS Journal on Computing, 2019, 31, 40-65.	1.0	23
40	Crowdsourcing contest dilemma. Journal of the Royal Society Interface, 2014, 11, 20140532.	1.5	22
41	Privacy-Preserving Power System Obfuscation: A Bilevel Optimization Approach. IEEE Transactions on Power Systems, 2020, 35, 1627-1637.	4.6	22
42	Transmission Network Expansion Planning: Bridging the gap between AC heuristics and DC approximations. , 2014, , .		21
43	Differentially Private Optimal Power Flow for Distribution Grids. IEEE Transactions on Power Systems, 2021, 36, 2186-2196.	4.6	20
44	Solving Steel Mill Slab Problems with constraint-based techniques: CP, LNS, and CBLS. Constraints, 2011, 16, 125-147.	0.4	18
45	Polynomial SDP cuts for Optimal Power Flow. , 2016, , .		18
46	Constraint Satisfaction over Bit-Vectors. Lecture Notes in Computer Science, 2012, , 527-543.	1.0	18
47	The Benefits of Social Influence in Optimized Cultural Markets. PLoS ONE, 2015, 10, e0121934.	1.1	18
48	Online Stochastic and Robust Optimization. Lecture Notes in Computer Science, 2004, , 286-300.	1.0	17
49	A column-generation approach for joint mobilization and evacuation planning. Constraints, 2015, 20, 285-303.	0.4	17
50	Efficient dynamic compressor optimization in natural gas transmission systems. , 2016, , .		17
51	Network flow and copper plate relaxations for AC transmission systems. , 2016, , .		16
52	Spatial Network Decomposition for Fast and Scalable AC-OPF Learning. IEEE Transactions on Power Systems, 2022, 37, 2601-2612.	4.6	16
53	Resiliency of on-demand multimodal transit systems during a pandemic. Transportation Research Part C: Emerging Technologies, 2021, 133, 103418.	3.9	15
54	Graphical models for optimal power flow. Constraints, 2017, 22, 24-49.	0.4	14

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55	The benefits of autonomous vehicles for community-based trip sharing. Transportation Research Part C: Emerging Technologies, 2021, 124, 102929.	3.9	13
56	The Objective-CP Optimization System. Lecture Notes in Computer Science, 2013, , 8-29.	1.0	13
57	An anytime multistep anticipatory algorithm for online stochastic combinatorial optimization. Annals of Operations Research, 2011, 184, 233-271.	2.6	12
58	Accurate load and generation scheduling for linearized DC models with contingencies. , 2012, , .		12
59	Constraint-based Very Large-Scale Neighborhood search. Constraints, 2012, 17, 87-122.	0.4	12
60	Taming the Unpredictability of Cultural Markets with Social Influence. , 2017, , .		12
61	Power system restoration planning with standing phase angle and voltage difference constraints. , 2014, , .		11
62	The future of optimization technology. Constraints, 2014, 19, 126-138.	0.4	11
63	Lagrangian Duality for Constrained Deep Learning. Lecture Notes in Computer Science, 2021, , 118-135.	1.0	11
64	LS(Graph): a constraint-based local search for constraint optimization on trees and paths. Constraints, 2012, 17, 357-408.	0.4	10
65	Optimal and efficient filtering algorithms for table constraints. Constraints, 2014, 19, 77-120.	0.4	10
66	Optimization of Structural Flood Mitigation Strategies. Water Resources Research, 2019, 55, 1490-1509.	1.7	10
67	Column Generation for Real-Time Ride-Sharing Operations. Lecture Notes in Computer Science, 2019, , 472-487.	1.0	10
68	Privacy-preserving obfuscation for distributed power systems. Electric Power Systems Research, 2020, 189, 106718.	2.1	10
69	Online stochastic reservation systems. Annals of Operations Research, 2009, 171, 101-126.	2.6	9
70	Dynamic structural symmetry breaking for constraint satisfaction problems. Constraints, 2009, 14, 506-538.	0.4	9
71	Large-scale zone-based evacuation planningâ€”Part I: Models and algorithms. Networks, 2021, 77, 127-145.	1.6	9
72	Spatio-Temporal Point Processes With Attention for Traffic Congestion Event Modeling. IEEE Transactions on Intelligent Transportation Systems, 2022, 23, 7298-7309.	4.7	9

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73	An exact and scalable problem decomposition for security-constrained optimal power flow. <i>Electric Power Systems Research</i> , 2021, 195, 106677.	2.1	9
74	Backtracking without trailing in CLP ($\hat{\alpha}, \infty$ Lin). <i>ACM Transactions on Programming Languages and Systems</i> , 1995, 17, 635-671.	1.7	8
75	Sequence-based abstract interpretation of Prolog. <i>Theory and Practice of Logic Programming</i> , 2002, 2, 25-84.	1.1	8
76	Popularity signals in trial-offer markets with social influence and position bias. <i>European Journal of Operational Research</i> , 2018, 266, 775-793.	3.5	8
77	Optimizing inspection routes in pipeline networks. <i>Reliability Engineering and System Safety</i> , 2020, 195, 106700.	5.1	8
78	The Commute Trip-Sharing Problem. <i>Transportation Science</i> , 2020, 54, 1640-1675.	2.6	8
79	Nutmeg: a MIP and CP Hybrid Solver Using Branch-and-Check. <i>SN Operations Research Forum</i> , 2020, 1, 1.	0.6	8
80	Compositional Derivation of Symmetries for Constraint Satisfaction. <i>Lecture Notes in Computer Science</i> , 2005, , 234-247.	1.0	8
81	A Path-Generation Matheuristic for Large Scale Evacuation Planning. <i>Lecture Notes in Computer Science</i> , 2014, , 71-84.	1.0	8
82	Constraint-Based Local Search for Constrained Optimum Paths Problems. <i>Lecture Notes in Computer Science</i> , 2010, , 267-281.	1.0	8
83	An Optimal Filtering Algorithm for Table Constraints. <i>Lecture Notes in Computer Science</i> , 2012, , 496-511.	1.0	8
84	Ridesharing and fleet sizing for On-Demand Multimodal Transit Systems. <i>Transportation Research Part C: Emerging Technologies</i> , 2022, 138, 103594.	3.9	8
85	Joint Vehicle and Crew Routing and Scheduling. <i>Lecture Notes in Computer Science</i> , 2015, , 654-670.	1.0	7
86	Joint Vehicle and Crew Routing and Scheduling. <i>Transportation Science</i> , 2020, 54, 488-511.	2.6	7
87	Market segmentation in online platforms. <i>European Journal of Operational Research</i> , 2021, 295, 1025-1041.	3.5	7
88	Constraint programming for combinatorial search problems. <i>ACM Computing Surveys</i> , 1996, 28, 76.	16.1	7
89	Differentially Private Distributed Optimal Power Flow. , 2020, , .		7
90	New developments in metaheuristics and their applications. <i>Journal of Heuristics</i> , 2016, 22, 359-363.	1.1	6

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91	A microkernel architecture for constraint programming. <i>Constraints</i> , 2017, 22, 107-151.	0.4	6
92	Communication-Constrained Expansion Planning for Resilient Distribution Systems. <i>INFORMS Journal on Computing</i> , 0, , .	1.0	6
93	<scp>Large-scale</scp> zone-based evacuation planning, Part <scp>II</scp>: Macroscopic and microscopic evaluations. <i>Networks</i> , 2021, 77, 341-358.	1.6	6
94	Differential privacy of hierarchical Census data: An optimization approach. <i>Artificial Intelligence</i> , 2021, 296, 103475.	3.9	6
95	Optimization Models for Estimating Transit Network Origin-Destination Flows with Big Transit Data. <i>Journal of Big Data Analytics in Transportation</i> , 2021, 3, 247-262.	1.4	6
96	Benders Subproblem Decomposition for Bilevel Problems with Convex Follower. <i>INFORMS Journal on Computing</i> , 2022, 34, 1749-1767.	1.0	5
97	RNA STRUCTURAL SEGMENTATION. , 2009, , 57-68.		4
98	Differential Privacy of Hierarchical Census Data: An Optimization Approach. <i>Lecture Notes in Computer Science</i> , 2019, , 639-655.	1.0	4
99	Parallel Composition of Scheduling Solvers. <i>Lecture Notes in Computer Science</i> , 2016, , 159-169.	1.0	3
100	Constraint-Based Local Search. , 2018, , 223-260.		3
101	Domain Consistency with Forbidden Values. <i>Lecture Notes in Computer Science</i> , 2010, , 191-205.	1.0	3
102	Optimal deployment of eventually-serializable data services. <i>Annals of Operations Research</i> , 2011, 184, 273-294.	2.6	2
103	A Column-Generation Algorithm for Evacuation Planning with Elementary Paths. <i>Lecture Notes in Computer Science</i> , 2017, , 549-564.	1.0	2
104	Transient dynamics in trial-offer markets with social influence: Trade-offs between appeal and quality. <i>PLoS ONE</i> , 2017, 12, e0180040.	1.1	2
105	Guest Editorial Special Issue on Analysis, Control, and Optimization of Energy Networks. <i>IEEE Transactions on Control of Network Systems</i> , 2019, 6, 922-924.	2.4	2
106	Transfer-Expanded Graphs for On-Demand Multimodal Transit Systems. <i>Lecture Notes in Computer Science</i> , 2020, , 167-175.	1.0	2
107	Bilevel Optimization for On-Demand Multimodal Transit Systems. <i>Lecture Notes in Computer Science</i> , 2020, , 52-68.	1.0	2
108	A Constraint Programming Approach for Non-preemptive Evacuation Scheduling. <i>Lecture Notes in Computer Science</i> , 2015, , 574-591.	1.0	2

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109	Branch-and-Check with Explanations for the Vehicle Routing Problem with Time Windows. Lecture Notes in Computer Science, 2017, , 579-595.	1.0	2
110	The flexible and real-time commute trip sharing problems. Constraints, 2020, 25, 160-179.	0.4	1
111	Domain consistency with forbidden values. Constraints, 2013, 18, 377-403.	0.4	0
112	Looking into the crystal-ball: a bright future for CP. Constraints, 2014, 19, 121-125.	0.4	0
113	A nonlinear optimization model for transient stable line switching. , 2017, , .		0
114	Graphical Models and Belief Propagation Hierarchy for Physics-Constrained Network Flows. The IMA Volumes in Mathematics and Its Applications, 2018, , 223-250.	0.5	0
115	Strengthening the SDP Relaxation of AC Power Flows With Convex Envelopes, Bound Tightening, and Valid Inequalities. , 2019, , .		0